Amendments to the Specification

Amend the paragraph bridging pages 9 and 10 as follows:

A significant aspect of the invention is that the actual play of the video game is based , not on a stored collection of ball routes, but rather on a mathematical model of the game stored in memory, which model includes a number of rules which govern the physical movement of the ball, using known mathematical modeling techniques, to which are applied a set of initial conditions under which the ball is placed in motion. In an actual physical game, it will be appreciated that this movement is affected ~~by~~ not only by the initial conditions or parameters under which the ball is launched, but also by the physical characteristics of the ball itself, the inclination of the play field, the physical characteristics of the play field, such as friction and the like, the arrangement of the play field boundary walls and obstacles and the like. Each time a ball collides with an obstacle, such as a wall of the play field, a peg 42, another ball or the like, the way in which its route will be altered will be a function of physical characteristics of the obstacle, such as shape, size resiliency, etc., and the trajectory, velocity and spin etc. of the ball at the time of collision. It can be seen that, in the physical game, these factors which affect ball movement are extremely complex and would be virtually impossible to completely accurately reproduce in a mathematical model. Thus, the model is necessarily somewhat simplified, but will, to the extent possible, represent realistic game conditions.

Please amend the paragraph bridging pages 11 and 12 as follows:

In developing a pay table, there will likely be too many possible sets of initial parameters or conditions to test each set individually. For example, if each of the parameters speed, angle and spin may range from zero to 65,535, there are 281,474,976,710,656 possible sets of these three initial conditions and, therefore, possible ball routes or game plays. Accordingly, pay table development must be done using a Monte Carlo approach. In this approach, the game model

randomly runs a large sample of games by randomly selecting a large number of sets of initial conditions (millions or more) and running them through the model, recording the outcome for each one. For example, the value of each parameter speed, angle and spin is randomly selected from its range (e.g. 0-65, 535) of possible values to arrive at a set of initial conditions, which is ~~their~~ then run through the model, and the process is ~~reported~~ repeated. It will be appreciated that the number of possible outcomes is limited by the number of destination slots on the play field, i.e., in the example illustrated in Fig. 3, there are four possible outcomes for each ball route. After recording all of the outcomes, the program determines how frequently each outcome occurred and, thus, the probability of occurrence of each outcome, resulting, e.g., in data as set forth in Table 1.

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